Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-9 (canceled)

10. (currently amended): A method of simulating the performance of a communication system which supports ~~provides a plurality of timeslots for supporting~~ transmissions that are received and transmitted by a plurality of users, the method comprising simulating possible realizations of a system configuration by performing a plurality of snapshots at specific instances of time, wherein the following steps are performed for each snapshot:

(a) starting a current snapshot with an empty simulated system where no users are present;

(b) selecting a new candidate user for consideration of admission to the simulated system;

(c) computing ~~an~~ interference levels ~~level~~ of the new candidate user ~~in each of the timeslots~~;

(d) invoking a first algorithm to determine whether the new candidate user should be admitted in the simulated system based upon the computed interference levels;

(e) if the first algorithm determines in step (d) that the new candidate user should be admitted in the simulated system:

(e1) allocating at least one timeslot to the new candidate user;

(e2) computing a transmission power level for the new candidate user based on the computed interference levels ~~level in the at least one allocated~~

~~timeslot~~; and

(e3) performing a power balancing process to update the transmission power levels of all users admitted in the simulated system;

(f) repeating steps (b)-(e) if there are any additional new candidate users to consider for admission to the simulated system; and

(g) ending the current snapshot if there are no more new candidate users to consider for admission to the simulated system.

11. (previously presented): The method of claim 10 further comprising:

(h) invoking a second algorithm using the interference levels of all of the users admitted to the simulated system; and

(i) determining whether the timeslot allocation of any user admitted to the simulated system should be modified and, if so, computing the transmission power levels of users affected by the modified timeslot allocation.

12. (previously presented): The method of claim 10 wherein the power balancing process of step (e3) further comprises:

(i) computing an interference level for each user admitted to the simulated system;

(ii) dropping each one of the admitted users having an interference level that exceeds an established interference level threshold; and

(iii) recording each occurrence of dropping an admitted user as a "drop" event for the purpose of collecting statistics.

13. (previously presented): The method of claim 10 wherein the power balancing process of step (e3) further comprises:

(i) computing a transmission power level for each user admitted to the simulated system;

(ii) dropping each one of the admitted users having a transmission power level that does not meet an established minimum transmission power level threshold; and

(iii) recording each occurrence of dropping an admitted user as a "drop" event for the purpose of collecting statistics.

14. (previously presented): The method of claim 10 wherein if the first algorithm determines in step (d) that the new candidate user should not be admitted in the simulated system, recording a "block" event indicating that the new candidate user should be blocked from connecting to the simulated system and proceeding to step (f).

15. (previously presented): The method of claim 10 wherein each admitted user has a respective quality requirement, the method further comprising:

(h) determining whether each user meets their respective quality requirement.

16. (currently amended): A method of simulating the performance of a communication system which supports ~~provides a plurality of timeslots for supporting~~ transmissions that are received and transmitted by a plurality of users, the method comprising simulating possible realizations of a system configuration by performing a plurality of snapshots of a simulated system at specific instances of time, wherein the following steps are performed for each snapshot:

(a) selecting a new candidate user for consideration of admission to the simulated system, wherein the simulated system is already being used by a plurality of admitted users during a current snapshot of the simulated system;

(b) computing ~~an~~ interference levels ~~level~~ of the new candidate user ~~in each of the timeslots~~ based on transmission power levels of the admitted users;

(c) invoking a first algorithm to determine whether the new candidate user should be admitted in the simulated system based upon the computed interference levels and the transmission power levels of the admitted users;

(d) if the first algorithm determines in step (c) that the new candidate user should be admitted in the simulated system:

(d1) allocating at least one timeslot to the new candidate user;

(d2) computing a transmission power level for the new candidate user based on the computed interference levels ~~level in the at least one allocated timeslot~~; and

(d3) performing a power balancing process to update the transmission power levels of all users admitted in the simulated system; and

(e) repeating steps (a)-(d) if there are any additional new candidate users to consider for admission to the simulated system; and

(f) ending the current snapshot if there are no more new candidate users to consider for admission to the simulated system.

17. (previously presented): The method of claim 16 further comprising:

(g) invoking a second algorithm using the transmission power levels of all of the users admitted to the simulated system; and

(h) determining whether the timeslot allocation of any user admitted to the simulated system should be modified and, if so, computing the transmission power levels of users affected by the modified timeslot allocation.

18. (previously presented): The method of claim 16 wherein the power balancing process of step (d3) further comprises:

(i) computing an interference level for each user admitted to the simulated system;

(ii) dropping each one of the admitted users having an interference level that exceeds an established interference level threshold; and

(iii) recording each occurrence of dropping an admitted user as a "drop" event for the purpose of collecting statistics.

19. (previously presented): The method of claim 16 wherein the power balancing process of step (d3) further comprises:

(i) computing a transmission power level for each user admitted to the simulated system;

(ii) dropping each one of the admitted users having a transmission power level that does not meet an established minimum transmission power level threshold; and

(iii) recording each occurrence of dropping an admitted user as a "drop" event for the purpose of collecting statistics.

20. (previously presented): The method of claim 16 wherein if the first algorithm determines in step (c) that the new candidate user should not be admitted in the simulated system, recording a "block" event indicating that the new candidate user should be blocked from connecting to the simulated system and proceeding to step (e).

21. (previously presented): The method of claim 16 wherein each admitted user has a respective quality requirement, the method further comprising:

(g) determining whether each user meets their respective quality requirement.